



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/014,328      | 11/13/2001  | Oren Rosenfeld       | U 013717-4          | 1498             |

7590                    09/16/2003  
Ladas & Parry  
26 West 61 Street  
New York, NY 10023

|                     |              |
|---------------------|--------------|
| EXAMINER            |              |
| VALENTINE, DONALD R |              |
| ART UNIT            | PAPER NUMBER |
| 1742                | 6            |

DATE MAILED: 09/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

6

|                              |                     |                  |
|------------------------------|---------------------|------------------|
| <b>Office Action Summary</b> | Applicant No.       | Applicant(s)     |
|                              | 10/014,328          | ROSENFELD ET AL. |
|                              | Examiner            | Art Unit         |
|                              | Donald R. Valentine | 1742             |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-99 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 36,97 and 98 is/are allowed.
- 6) Claim(s) See Continuation Sheet is/are rejected.
- 7) Claim(s) See Continuation Sheet is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some \*
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

|  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                    | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4-5</u> . | 6) <input type="checkbox"/> Other: _____                                     |

Continuation of Disposition of Claims: Claims rejected are

1,4,12,13,15,18,37,40,41,48,49,51,55,56,59,60,64,65,67,72,76,79,80,83,86,87,90,93 and 94.

Continuation of Disposition of Claims: Claims objected to are 2,3,5,7-11,16,17,19-35,38,39,43-47,50,52-54,62,63,66,68-71,73-75,77,78,81,82,84,85,88,89,91,92,95 and 96.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 4, 12-13, 15, 18, 37, 40-41, 48-49, 51, 55-56, 59-60, 64-65, 67, 72, 76, 79-80, 83, 86-87, 90, 93-94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dammann in view of Weber.

Dammann shows a hydrogen-fueled locomotion subsystem (vehicle and engine). See col. 1-2; lines 65-68 and 1-6, respectively. There is a “refuelable hydrogen generator” (gas generation unit 16) for supplying hydrogen fuel to the

locomotion system. The gas generation unit (16) communicates with water supply 18 from which hydrogen is generated on demand. (See col. 3, lines 58-62). Dammann shows a “buffer volume” which appears to be equivalent to a buffer tank as recited in applicant’s claim 18. Replaceable electrodes are shown at col. 4, lines 6-10, (applicant’s claims 49 and 51).

Dammann does not show a “refueling system’ which provides water, electrolyte, hydrogen, a metal containing material and electric power to the electrochemical reactor (gas generator unit).

Weber shows apparatus and method in which fuel gas communicates with an internal combustion engine. Additionally, to an electrochemical cell is added a salt to water already within the cell. “Metal containing material” is added to the cell in the form of sodium chloride and calcium chloride. Power is externally required. Hydrogen is generated in the cell. The apparatus appears to be operator controlled because on and off modes are taught, apparently activated by an operator. See col. 2, lines 30-66.

It would be considered within the skill of the art to substitute the system of Weber for the electrochemical gas generation unit of Dammann because hydrogen fuel generated from different sources for introduction into internal combustion

engines (both references show this) would be expected to have identical qualities as no unexpected results would be presented by such a substitution.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 6, 42 and 61 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6, 42 and 61 contain the trademark/trade name TEFLON. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe polytetrafluoroethylene and, accordingly, the identification/description is indefinite.

6. Claim 99 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 99 recites the limitation "said electrolyte" and "said anode" in lines 2 and 9, respectively. There is insufficient antecedent basis for these limitations in the claim.

***Allowable Subject Matter***

7. Claims 36 and 97-98 are allowed.

8. Claims 2-3, 5-11, 14, 16-17, 19-35, 38-39, 42-47, 50, 52-54, 57-58, 61-63, 66, 68-71, 73-75, 77-78, 81-52, 84-85, 88-89 and 90-92 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 6, 42, 61 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. Claim 99 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

11. The following is a statement of reasons for the indication of allowable subject matter: The references of record do not show or suggest method and apparatus with a hydrogen fueled locomotion subsystem, at least one refuelable hydrogen generator, means for supplying at least one water, electrolyte, hydrogen, a metal containing material and electrical power to the generator, wherein the subsystem comprises a fuel cell and electrical motor powered by the fuel cell.

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shoaf et al, Simuni and Fairlie et al show hydrogen generation for supplying to vehicles.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald R. Valentine whose telephone number is 703-308-3327. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 703-308-1146. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

*Donald R Valentine*

Donald R. Valentine  
Primary Examiner  
Art Unit 1742

drv